

PACKAGE INCLUDING ACCESS OPENING WITH CLOSURE FLAP

The present invention relates to a novel package for consumer goods including an opening for access to the pack contents and a flap for closing the opening. The invention also encompasses a container including such a package inside an outer housing. The packages and containers of the invention are useful in the packaging of elongate articles such as cigarettes and other smoking articles.

Cigarettes are often presented in hinge lid packs, which comprise a lower rectangular box portion having front and rear walls connected by side walls and a bottom wall, and a lid comprising front and rear walls connected by side walls and a top wall, the lid being hinged to the box to close it.

It has also been proposed to provide a pack comprising front and rear walls joined by side walls, a bottom wall and a top wall. Access to the interior of the pack is provided by a cutout from the top wall extending from the rear edge across the top wall to the front edge of the top wall and partly into the front wall of the pack, leaving margins on both sides of the top wall and leaving most of the front wall intact. A flap extends upwards from the rear wall of the pack that can be bent over the top wall and the front wall to close the opening and be secured to the front wall. Packs of this type can suffer from a lack of rigidity, especially when made of relatively thin card or of paper.

It would be useful to provide a package of the foregoing type having greater rigidity to minimize distortion of the package in use, so giving greater protection to consumer goods in the package. It would also be useful to provide such a package that can be manufactured and assembled with minimal modification to conventional packaging machinery and techniques.

According to a first aspect of the invention, there is provided a package for consumer goods comprising a box, the box comprising a front wall, a rear wall opposed to the front wall, a bottom wall, opposed side walls and a top wall having an opening therein for accessing the consumer goods in the package, in which the opening extends across the top wall from the front edge thereof and wherein the periphery of the access opening is spaced apart from the rear edge and the side edges of the top wall so that the top wall extends around the rear and sides of the opening.

In some embodiments, the package further comprises a flap moveable between a closed position in which the flap covers the opening and an open position in which the opening is uncovered. In some embodiments, the flap is hinged to the rear wall along the top edge of the rear wall.

In some embodiments, the opening also extends part way down the front wall from the front edge of the top wall and the flap comprises a top flap portion that overlies the top wall

when the flap is in the closed position and a front flap portion that at least partly overlies the front wall when the flap is in the closed position.

In some embodiments, the opening extends over no more than 80 percent, preferably no more than 70 percent, more preferably no more than 60 percent of the depth of the top wall from the front edge of the top wall towards the rear edge thereof. In some embodiments, the surface area of the opening in the top wall of the housing is no more than 70 percent, preferably no more than 60 percent, more preferably no more than 50 percent of the surface area of the top of the package. In some embodiments, the surface area of the opening is at least 5 percent, preferably at least 20 percent of the surface area of the top of the package.

In some embodiments, in the closed position the flap can be received behind the front wall of the housing or in a slit or cut out in the front wall of the package in the closed position.

In some embodiments, the flap includes a resealable adhesive on at least a portion of the inner surface thereof so that the closure flap can be resealably affixed to the front wall of the package in the closed position.

In some embodiments, the top wall comprises an upper top wall panel extending from the front wall of the housing and including an integral rear portion and side portions and a pair of lower top wall panels extending from the top edges of the side walls of the housing and underlying the side portions of the upper top wall panel.

According to a second aspect of the invention there is provided a package according to the first aspect of the invention housed in an outer housing.

Packages according to the invention are useful for containing bundles of smoking articles, such as cigarettes, in the box. In a third aspect, the invention encompasses a pack according to the invention with one or more bundles of smoking articles inside. The package may contain, for example, cigarettes, cigars or cigarillos. It will be appreciated that through appropriate selection of the package dimensions, packages according to the invention may be made for different numbers of conventional size, king size, super-king size, slim or super-slim cigarettes. Packages in accordance with the present invention can also be used for consumer goods other than smoking articles.

In packages according to the invention, the periphery of the opening is set apart from the rear and side edges of the top wall of the package. The top wall thus extends around three sides (rear and both sides) of the opening so that the side portions of the top wall are bridged by the rear portion. This provides improved rigidity and in particular, improved resistance to shear forces. This in turn reduces the likelihood of distortion of the package, for example when a user is holding it, which provides improved protection for the consumer goods in the package.

The top wall can be formed as a single panel rather than two separate side panels as in the prior art, because of the inclusion of the rear bridging portion. This reduces the number of folds required during the assembly process, simplifying production.

The closure flap functions in a similar way to prior art packs; the presence of the bridging portion of the top wall does not significantly affect the construction or closure of the package.

Also according to the invention there is provided a laminar blank for a package according to any of claims 1 to 11, the blank comprising a box-defining portion including a front wall panel, a rear wall panel, first and second side wall panels and a top wall panel including an opening, in which the opening extends from the front edge of the top wall panel and in which the top wall panel extends around the back and sides of the opening, and a flap hinged to the rear wall panel of the box-defining portion along the top edge of the rear wall panel. Preferably, the front wall panel has an opening contiguous with the opening in the top wall panel.

In preferred embodiments, the blank comprises a front wall panel, an outer side wall panel extending from each of two opposed edges of the front wall panel, a top wall panel extending from an edge of the front wall panel, a bottom wall panel extending from an edge of the front wall panel opposite the top wall panel, a side wall tab extending from each of two opposed edges of the bottom wall panel, a rear wall panel extending from an edge of the bottom wall panel opposite the front wall panel, an inner side wall panel extending from each of two opposed edges of the rear wall panel, and a closure flap panel extending from the edge of the rear wall panel opposite the bottom wall panel, the panels and tabs being defined from each other by fold lines. Preferably, the closure flap panel comprises a top wall closure panel extending from the panel edge of the rear wall panel opposite the bottom wall panel, and a front wall closure panel extending from the edge of the top wall closure panel opposite the rear wall panel.

It will be appreciated that features described with reference to one aspect of the present invention are applicable to any other aspect of the invention. Advantages described in relation to one aspect of the invention may also apply to another aspect of the invention.

The terms “front”, “rear”, “upper”, “lower”, “above”, “below”, “side”, “left”, “right”, “lateral”, “top”, “bottom” and other terms used to describe relative positions of the components of containers according to the invention refer to the container in an upright position with an open end of the box portion at the top and the consumer goods accessible from the upper end. The terms “side” and “lateral” are used with reference to side walls of the container when the container is viewed from the front in its upright position.

When the packages of the invention are to be used as packs for cigarettes or other smoking articles, they can be made to hold different numbers of smoking articles, or different

arrangements of smoking articles. For example, a pack according to the invention may be designed to hold a total of between ten and twenty smoking articles.

The smoking articles in the pack may be arranged in different collations, depending on the total number of smoking articles. Preferably, the smoking articles are arranged in two or more rows. The two or more rows may contain the same number of smoking articles. Alternatively, the two or more rows may include at least two rows containing different number of smoking articles to each other. Preferably, the ratio of the height of the container to the depth of the container is in between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8 to 1, most preferably between about 3 to 1 and 5 to 1.

Preferably, the ratio of the width of the container to the depth of the container is between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8 to 1, most preferably between about 2 to 1 and 3 to 1.

The exterior surfaces of containers according to the invention may be printed, embossed, debossed or otherwise embellished with manufacturer or brand logos, trade marks, slogans and other consumer information and indicia.

The term "hinge" is used throughout this specification to refer to a line common to the flap and the box of the package; the flap pivots about the hinge line between a closed position and an open position. The hinge may extend across all or a part of the width of the top wall of the container at any location on the rear margin of the box top wall, that is, between the rear edge of the box top wall and the rear edge of the opening. In some embodiments, the hinge line may substantially coincide with the rear edge of the box top wall. In other embodiments, the hinge may extend across all or a part of the width of the box top wall of the container at an intermediate position between the rear edge of the box top wall and the front edge of the box top wall.

In use of a package according to the invention, the user pivots the flap about the hinge line to uncover the opening and so gain access to articles held in the box. The user pivots the flap back to cover the opening. When the flap is in the closed position, the opening is at least partly obstructed by the lid so that the interior of the package is inaccessible and the consumer goods cannot be removed from the package.

Packages according to the invention may be formed of a single laminar blank. In a fourth aspect, the invention provides a laminar blank for a package according to the invention. In some embodiments, the blank comprises a box-defining portion including a front wall panel, a rear wall panel, first and second side wall panels and a top wall panel including an opening, in which the opening extends from the front edge of the top wall panel and in which the top wall panel extends around the back and sides of the opening; and a flap hinged to the box. In

some embodiments, the flap is hinged to the rear wall panel of the box-defining portion along the top edge of the rear wall panel.

The term “panel” is used in this specification to refer to a portion of a package blank that forms part or all of a wall of the assembled container. A panel may depend along one or more fold lines from one or more other panels. The term “fold line” refers to a fold between two adjacent panels. When forming the container, adjacent panels are folded along their common fold line, which may come to define an edge of the container or of a portion thereof. In the assembled container, a “wall” may be formed of one or of several overlying panels that are attached to each other, for example by means of an adhesive. Further, a wall may be formed from two or more abutting or overlapping panels.

Packages according to the present invention can conveniently be manufactured by folding laminar blanks made from any suitable material including, but not limited to, cardboard, paperboard, plastic, metal, or combinations thereof. Preferably, the package is formed from a folded laminar card blank. Preferably, the card has a weight of between about 100 grams per square metre and about 250 grams per square metre, more preferably between about 120 grams per square metre and about 180 grams per square metre. Packages according to the invention will typically be assembled in the conventional way using standard manufacturing equipment, by folding one or more laminar blanks around the consumer articles and sealing overlying panels of the laminar blanks together in order to retain the container in the assembled shape. This may be achieved using conventional glues or adhesives.

The laminar blanks include score lines or fold lines delineating one panel of the blank from another, allowing the blank to be formed into the package and, for some panels, to allow them to hinge on another panel. In the finished package, the score lines or fold lines may be on the inside of the package or on the outside of the package.

The invention will be further described, by way of example, with reference to the drawings in which:

Figure 1 is an isometric view of a package according to one embodiment of the invention;

Figure 2 shows a blank for the package of Figure 1.

Figure 3 is an isometric view of a package according to another embodiment of the invention; and

Figure 4 shows a blank for the package of Figure 3.

The package 110 of the embodiment of Figure 1 is a pack for cigarettes. It comprises a box 112 having a front wall 114, a rear wall 116 (not visible in Figure 1) opposed to the front wall and side walls 118, 118' (only one of which is visible in Figure 1) connecting the front wall to the rear wall, a top wall 120 and a bottom wall 122 (not visible in Figure 1). An opening 124

extends part way across the front portion of the top wall 120 and part way down the front wall 114. Rear 126 and side 128, 128' margins of the top wall remain and define that part of the opening 124 in the top wall. The opening extends down 25% of the height of the front wall 114; this proportion can be changed depending on the size of the package in relation to the goods carried in the package. In the embodiment of Figure 1, the opening extends across about 2/3 of the width of the package; again, this proportion can be changed depending on the size of the package in relation to the goods carried in the package.

A closure flap 130 extends from the rear wall 16 of the package and is hinged to the rear edge 132 of the top wall 120. The closure flap consists of a top wall closure panel 134 extending from the rear wall 116 of the pack, from which a front wall closure panel 136 extends along a fold 138. A tab 140 extends from the front wall closure panel 136 along fold 142. A line 144 of resealable adhesive extends across the lower part of the front wall closure panel 136.

In use of the package 110, the user holds the tab 138 of the flap 130 of the closed package and hinges it upwards, unsealing the line 144 of resealable adhesive to uncover the opening 124 to allow a cigarette 146 to be removed from the package. The pack is closed by hinging the top wall panel 134 of the flap onto the top wall 120 and then hinging the front wall panel 136 of the flap onto the front wall 114 of the package to close the opening 124. Pressure on the front wall panel will reseal the line 144 of resealable adhesive to hold the flap 130 in the closed position.

Figure 2 shows a blank 200 for making a pack of the type shown in Figure 1. In Figure 2, solid lines indicate cuts in the blank and broken lines indicate fold lines. The blank is a single piece of paper or card comprising rectangular panels corresponding to each panel of the pack and additional panels for construction of the pack, as follows. From each long edge of a front wall panel 214 extends an outer side wall panel 218, defined from the front wall panel by score lines 250. From one short edge of the front wall panel 214 extends a top wall panel 220, defined from the front wall panel by a score line 252. A generally rectangular cutout 224 from the front wall and top wall panels provides the opening 124 in the top and front walls of the finished pack. From the other short edge of the front wall panel 214 extends a bottom wall panel 222, defined from the front wall panel by a score line 254. From the opposite edge of the bottom wall panel 222 extends a rear wall panel 216, defined from the bottom wall panel by a score line 256. From each long edge of the rear wall panel 216 extend inner side wall panels 218', defined from the rear wall panel by score lines 250'. From the short edges of the inner side wall panels 218' adjacent the outer side wall panels 218 extend side wall tabs 258, defined from the box inner side wall panels by score lines 260. From the other short edges of the inner side wall panels 218' extend top wall tabs 262, defined from the inner side wall

panels by score lines 264. From the short edge of the rear wall panel 216 opposite that from which the bottom panel 222 extends, a top wall closure panel 234 extends, defined from the rear wall panel by a score line 266; from the opposite edge of this panel extends a front wall closure panel 236, defined by a score line 268. From the opposite edge of the front wall closure panel 236 extends a tab panel 240, defined by a score line 270.

To form a pack from the blank, the pack is folded around a bundle of cigarettes so that the front 214 and rear 216 wall panels oppose each other, connected by the inner 218' and outer 218 side walls, which are adhered together. The side wall tabs 258 are folded onto and adhered to the inside of the bottom wall panel 222. The top wall tabs 262 are folded onto the top of the bundle and the top wall panel 220 is folded onto and adhered to the top wall tabs. A strip of resealable adhesive is applied to the inside face of the front wall closure panel 236. The score lines between the rear wall panel 214, the top wall closure panel 234, the front wall closure panel 236 and the tab panel 240 are folded, so that the pack can be closed by adhesion of the adhesive strip 144 (Figure 1) on the front wall closure panel to the front wall panel 214. The pack may then be overwrapped, with a transparent plastics film, such as a biaxially oriented polypropylene (BOPP) film.

The pack 310 of the embodiment shown in Figure 3 is similar to that shown in Figure 1 (and like reference numerals are used to show like elements) except for the way in which the closure flap 330 is retained in the closed position.

The package 310 comprises a box 112 having a front wall 114, a rear wall 116 (not visible in Figure 3) opposed to the front wall and side walls 118, 118' (only one of which is visible in Figure 3) connecting the front wall to the rear wall, a top wall 120 and a bottom wall 122 (not visible in Figure 3). An opening 124 extends part way across the front portion of the top wall 120 and part way down the front wall 114. Rear 126 and side 128, 128' margins of the top wall remain and define the portion of the opening 124 in the top wall. The opening extends down 25% of the height of the front wall 114; this proportion can be changed depending on the size of the package in relation to the goods carried in the package. In the embodiment of Figure 3, the opening extends across about 2/3 of the width of the package; the width of the opening; again, this proportion can be changed depending on the size of the package in relation to the goods carried in the package.

A closure flap 330 extends from the rear wall 116 of the package and is hinged to the rear edge 132 of the top wall. The flap consists of a top wall closure panel 334 extending from the rear wall 116 of the pack, from which a front wall closure panel 336 extends along a fold 338. The front wall closure panel comprises an upper portion 340 of substantially the same width as the front wall 114 from which extends, along fold 342, a tapered panel 344. The tapered panel 344 is of a width sufficient to close the aperture 124 in the front wall of the pack.

The width of the tapered panel 340 reduces in the direction away from the upper portion 340 of the front wall closure panel 336. A tab 346 extends from the tapered panel 344 from a fold 348 along the edge of the tapered panel opposite the upper portion 344. A slot 350 extends across the middle part of the width of the front wall 114 of the pack, below the lower edge of the opening 124. The slot 350 can receive the free end portion of the tab 346 of the tapered panel 344 and the lower part of the tapered panel itself when the flap is in the closed position, holding the flap in that position.

To open the pack, the user pulls the tapered tab 340 free of the slot 348 and hinges the flap 330 upwards to uncover the opening 124. To close the pack, the user hinges the top wall panel 334 of the flap onto the top wall 20 and then hinges the front wall panel 336 of the flap onto the front wall 114 of the package to close the opening 24. The free end portion of the tapered panel 340 is inserted into the slot 348 to hold the flap in the closed position. The fold lines 342, 248 between the upper portion 340, the tapered panel 344 and the tab 346 of the front wall closure panel 336 facilitate insertion of the panel into and removal it from the slot 350.

Figure 4 shows a blank 400 for making a pack of the type shown in Figure 3. In Figure 4, solid lines indicate cuts in the blank and broken lines indicate score lines. The blank is a single piece of paper or card comprising rectangular panels corresponding to each wall of the pack and additional panels for construction of the pack, as follows. The blank 400 is similar to the blank 200 of Figure 2 (and like reference numerals are used to show like elements). The blank is a single piece of paper or card comprising rectangular panels corresponding to each wall of the pack and additional panels for construction of the pack, as follows. From each long edge of a front wall panel 214 extends an outer side wall panel, defined from the front wall panel by score lines 250. From one short edge of the front wall panel 214 extends a top wall panel 220, defined from the front wall panel by a score line 252. A generally rectangular cutout 224 from the front wall and top wall panels provides the opening 124 in the top and front walls of the finished pack. A slot 350 extends partially across central part of the front wall panel 214. From the other short edge of the front wall panel 214 extends a bottom wall panel 222, defined from the front wall panel by a score line 254. From the opposite edge of the bottom wall panel 222 extends a rear wall panel 216, defined from the bottom wall panel by a score line 256. From each long edge of the rear wall panel 216 extend inner side wall panels 218', defined from the rear wall panel by score lines 250'. From the short edges of the inner side wall panels 218' adjacent the outer side wall panels 218 extend side wall tabs 258, defined from the box inner side wall panels by score lines 260. From the other short edges of the inner side wall panels 218' extend top wall tabs 262, defined from the inner side wall panels by score lines 264. From the short edge of the rear wall panel 216 opposite that from

which the bottom panel 222 extends, a top wall closure panel 434 extends, defined from the rear wall panel by a score line 466; from the opposite edge of this panel extends the upper portion 440 of a front wall closure panel 436, defined by a score line 468 from the top wall closure panel 434. From the opposite edge of the upper portion 440 extends a tapered panel 444, defined from the upper portion 440 by a score line 470. From the opposite edge of the tapered panel 444 extends a tab panel 446, defined from the tapered panel by a score line 448.

To form a pack from the blank, the pack is folded around a bundle of cigarettes so that the front 214 and rear 216 wall panels oppose each other, connected by the inner 218' and outer 218 side walls, which are adhered together. The side wall tabs 258 are folded onto and adhered to the inside of the bottom wall panel 222. The top wall tabs 262 are folded onto the top of the bundle and the top wall panel 220 is folded onto and adhered to the top wall tabs. The score lines between the rear wall panel 214, the top wall closure panel 434, the upper portion 440 of the front wall closure panel 436, the tapered portion 444 of the front wall closure panel and the tab panel 446 are folded, so that the pack can be closed by insertion of the tab panel and part of the tapered panel into the slot 350 in the front wall panel 214. The pack may then be overwrapped, with a transparent plastics film, such as a biaxially oriented polypropylene (BOPP) film.

CLAIMS

1. A package for consumer goods comprising a box, the box comprising:
 - a front wall;
 - a rear wall opposed to the front wall;
 - a bottom wall;
 - opposed side walls;
 - a top wall having an opening therein for accessing the consumer goods in the package, the opening extends across the top wall from the front edge thereof and wherein the periphery of the access opening is spaced apart from the rear edge and the side edges of the top wall so that the top wall extends around the rear and sides of the opening; and
 - a flap hinged to the rear wall along the top edge of the rear wall moveable between a closed position in which the flap covers the opening and an open position in which the opening is uncovered.
2. A package according to claim 1 in which the opening also extends part way down the front wall from the front edge of the top wall and in which the flap comprises a top flap portion that overlies the top wall when the flap is in the closed position and a front flap portion that at least partly overlies the front wall when the flap is in the closed position.
3. A package according claim 1 or 2 in which the opening extends over no more than 80 percent of the depth of the top wall from the front edge of the top wall towards the rear edge thereof.
4. A package according to claim 1, 2 or 3 in which the surface area of the opening in the top wall of the housing is no more than 70 percent of the top of the package.
5. A package according to any preceding claim in which the surface area of the opening is at least 5 percent of the surface area of the top of the package.
6. A package according to any preceding claim formed of a single laminar blank.
7. A package according to any preceding claim in which the flap can be received behind the front wall of the housing in the closed position.
8. A package according to any of claims 1 to 6 in which the flap includes a resealable adhesive on at least a portion of the inner surface thereof so that the closure flap can be resealably affixed to the front wall of the package in the closed position, or in which the flap can be received in a slit or cut out in the front wall of the package in the closed position.

9. A package according to any preceding claim in which the top wall comprises an upper top wall panel extending from the front wall of the housing and including an integral rear portion and side portions and a pair of lower top wall panels extending from the top edges of the side walls of the housing and underlying the side portions of the upper top wall panel.
10. A package according to any preceding claim containing a bundle of smoking articles within the box.
11. A container according to any preceding claim comprising a package according to any preceding claim in an outer housing.
12. A laminar blank for a package according to any of claims 1 to 11, the blank comprising:
a box-defining portion including a front wall panel, a rear wall panel, first and second side wall panels and a top wall panel including an opening, in which the opening extends from the front edge of the top wall panel and in which the top wall panel extends around the back and sides of the opening; and
a flap hinged to the rear wall panel of the box-defining portion along the top edge of the rear wall panel.
13. A blank according to claim 12 comprising:
a front wall panel;
an outer side wall panel extending from each of two opposed edges of the front wall panel;
a top wall panel extending from an edge of the front wall panel having an opening therein extending from the edge of the front wall panel;
a bottom wall panel extending from an edge of the front wall panel opposite the top wall panel;
a side wall tab extending from each of two opposed edges of the bottom wall panel;
a rear wall panel extending from an edge of the bottom wall panel opposite the front wall panel;
an inner side wall panel extending from each of two opposed edges of the rear wall panel; and
a closure flap panel extending from the edge of the rear wall panel opposite the bottom wall panel,
the panels and tabs being defined from each other by fold lines.
14. A blank according to claim 13 in which the closure flap panel comprises:

a top wall closure panel extending from the panel edge of the rear wall panel opposite the bottom wall panel; and

a front wall closure panel extending from the edge of the top wall closure panel opposite the rear wall panel.

15. A blank according to claim 13 or 14 in which the front wall panel has an opening contiguous with the opening in the top wall panel.